HYDRAULIC ROTARY HEADS PRODUCT RANGE

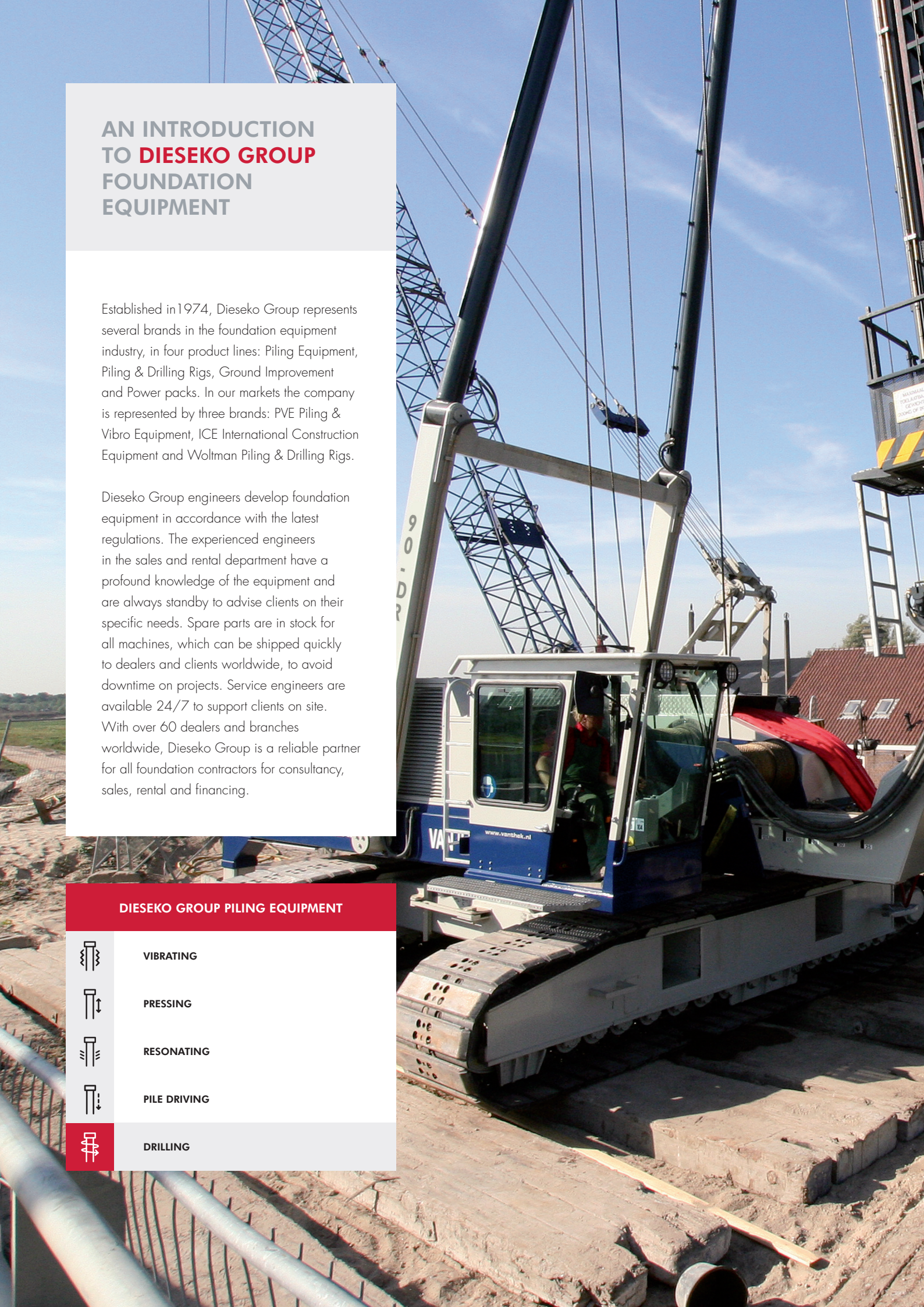
DIESEKO GROUP

PILING & VIBRO EQUIPMENT

AN INTRODUCTION TO **DIESEKO GROUP** FOUNDATION EQUIPMENT

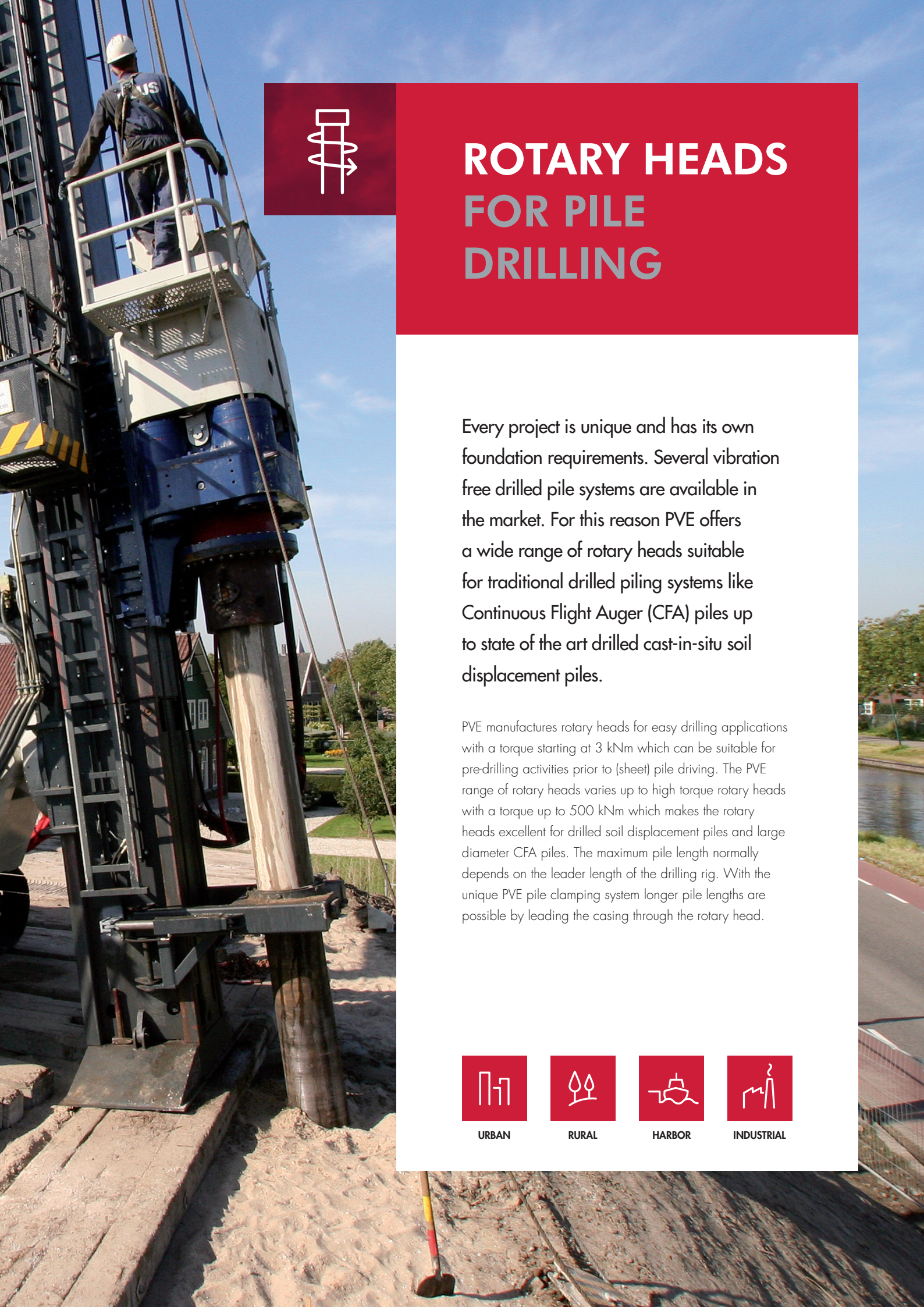
Established in1974, Dieseko Group represents several brands in the foundation equipment industry, in four product lines: Piling Equipment, Piling & Drilling Rigs, Ground Improvement and Power packs. In our markets the company is represented by three brands: PVE Piling & Vibro Equipment, ICE International Construction Equipment and Woltman Piling & Drilling Rigs.

Dieseko Group engineers develop foundation equipment in accordance with the latest regulations. The experienced engineers in the sales and rental department have a profound knowledge of the equipment and are always standby to advise clients on their specific needs. Spare parts are in stock for all machines, which can be shipped quickly to dealers and clients worldwide, to avoid downtime on projects. Service engineers are available 24/7 to support clients on site. With over 60 dealers and branches worldwide, Dieseko Group is a reliable partner for all foundation contractors for consultancy, sales, rental and financing.



DIESEKO GROUP PILING EQUIPMENT

- VIBRATING
- PRESSING
- RESONATING
- PILE DRIVING
- DRILLING



ROTARY HEADS FOR PILE DRILLING

Every project is unique and has its own foundation requirements. Several vibration free drilled pile systems are available in the market. For this reason PVE offers a wide range of rotary heads suitable for traditional drilled piling systems like Continuous Flight Auger (CFA) piles up to state of the art drilled cast-in-situ soil displacement piles.

PVE manufactures rotary heads for easy drilling applications with a torque starting at 3 kNm which can be suitable for pre-drilling activities prior to (sheet) pile driving. The PVE range of rotary heads varies up to high torque rotary heads with a torque up to 500 kNm which makes the rotary heads excellent for drilled soil displacement piles and large diameter CFA piles. The maximum pile length normally depends on the leader length of the drilling rig. With the unique PVE pile clamping system longer pile lengths are possible by leading the casing through the rotary head.

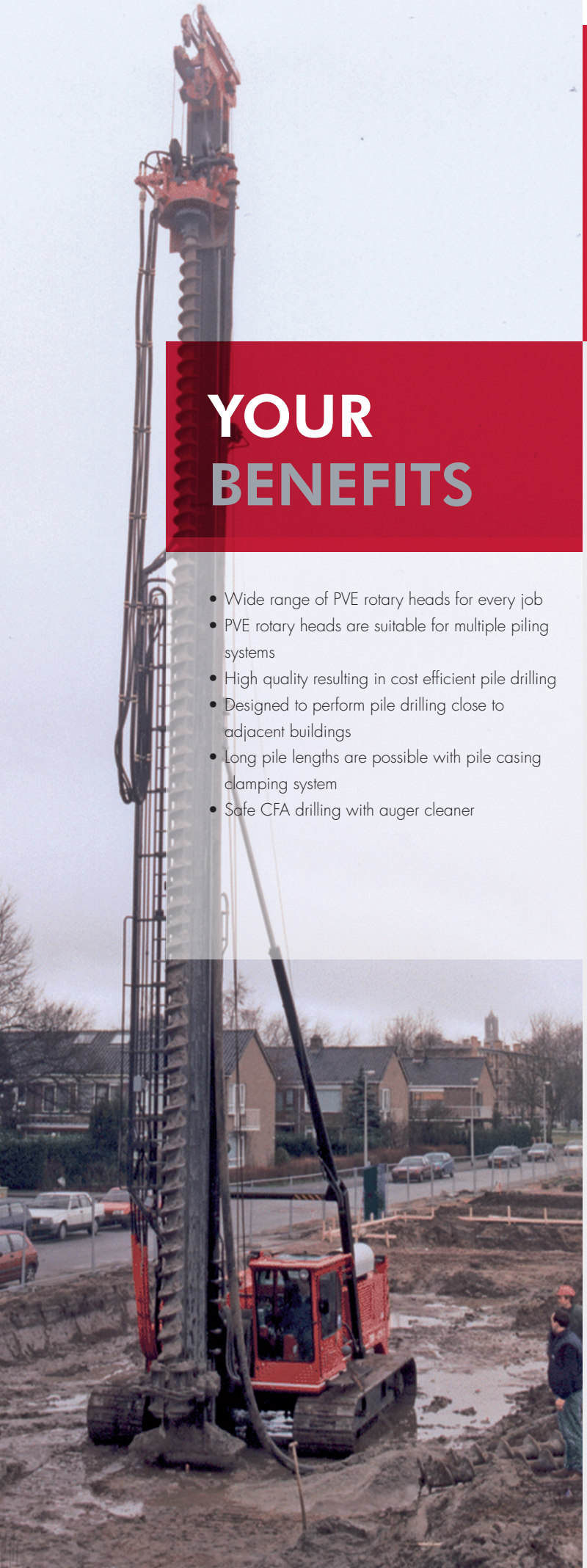
URBAN RURAL HARBOR INDUSTRIAL

EXPERIENCE THE ADVANTAGE OF PVE ROTARY HEADS

PVE rotary heads are designed to drill with variable speed and are assembled with A-brand components. The ingenious design enables a very close working distance to adjacent buildings. The heaviest rotary head, with a torque capacity of 500 kNm, will drill casings through dense soil layers ensuring a smooth and efficient piling operation.

The performance of drilled soil displacement piles requires high torque rotary heads. For CFA piling rotary heads with torque values up to 250 kNm are usually sufficient. For the CFA piles application PVE developed a range of auger cleaners. The PVE auger cleaners are powered hydraulically and have been designed with the knowledge of many years of field experience. Auger cleaners remove extracted soil during drilling ensuring a safe work environment. The PVE auger cleaners can be assembled in such a way that they are able to guide the drilling auger on the right pile position.

Suitable cranes for drill & rotary head applications



YOUR BENEFITS

- Wide range of PVE rotary heads for every job
- PVE rotary heads are suitable for multiple piling systems
- High quality resulting in cost efficient pile drilling
- Designed to perform pile drilling close to adjacent buildings
- Long pile lengths are possible with pile casing clamping system
- Safe CFA drilling with auger cleaner

DRILLLING APPLICATIONS

CFA DRILLING

Continuous Flight Auger (CFA) piling is a fast and sound proof piling system. An auger driven by the rotary head is drilled to the required pile tip level while transporting soil to the work surface. After the required pile depth is reached concrete is pumped through the rotary head in the hollow shaft of the auger. During concreting the auger then is extracted and the drilled shaft is filled with concrete. PVE also supplies Woltman crawler mounted concrete pumps to support your CFA piling operations.

DOUBLE ROTARY DRILLING

Double rotary drilling is actually a CFA pile where the CFA auger is separated from the soil by an outer casing. Both auger and outer casing are driven by independent rotary heads in counter rotation. The two independent rotary drivers are coupled to each other to ensure simultaneous lowering and lifting of auger and casing. Double rotary drilling is often used of secant piling or contiguous piles for shoring purposes.

FULL DISPLACEMENT DRILLING

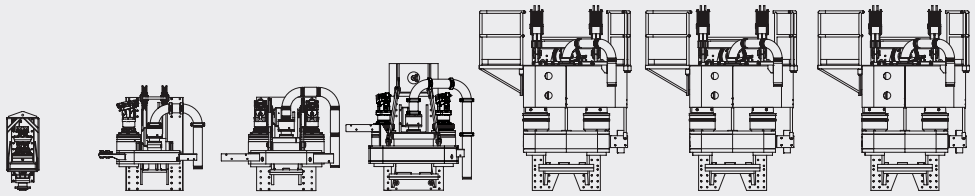
Drilling cast-in-situ soil displacement piles have the advantage of relatively high bearing capacities without out coming soil to the surface. A drill casing with a special pile tip pushes the soil sidewards into the surrounding layers. After reaching the required pile tip level, the casing is filled with rebar and concrete. The casing then is ready for extraction, leaving the drill tip behind and forming a smooth and strong reinforced pile shaft. The described drilling operation can also be performed while injecting grout through a nozzle in the drill casing and pile tip.

ROTARY HEADS & AUGER CLEANERS

COMPLETE RANGE FOR EVERY CHALLENGE

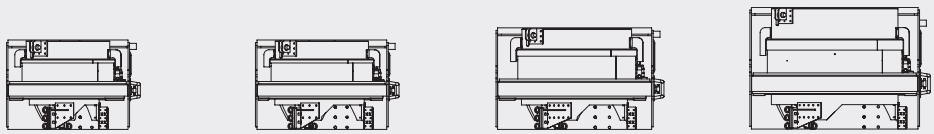
With the complete range of rotary heads PVE offers a solution for several drilled pile systems. Small compact rotary heads suitable for pre-drilling and CFA piles up to large high torque rotary heads for large diameter CFA piles and of course drilled soil displacement piles.
In case your piling rig needs more power to perform pile drilling, PVE manufactures and supplies power packs which are very suitable to power hydraulic rotary heads, when the power and hydraulic system of the drilling rig is not sufficient.

HYDRAULIC ROTARY HEADS



		RH-4	RH-8	RH-15	RH-25	RH-40-HS	RH-45-HS	RH-50
Maximum torque	ton/m	3,2	8	15	25	40	45	50
Maximum speed	rpm	35	0-40	0-30	0-24	0-26	0-22	0-16
Maximum shaft diameter	mm	No shaft	340	340	500	600	600	600
Maximum pressure	bar	350	300	325	350	350	350	350
Maximum oilflow	l/min	260	350	520	610	800	800	800
Height	mm	1313	1575	1575	1575	2220	2220	2220
Depth	mm	595	1080	1058	1171	1150	1150	1150
Width	mm	550	1115	1281	1500	1740	1740	1740
Weight indication	kg	500	2400	3400	4500	8000	8000	8000

AUGER CLEANERS



		BS-600	BS-800	BS-1000	BS-1200
Maximum drill diameter	mm	550	750	950	1150
Required oil flow	l/min	100	100	100	100
Working pressure	bar	200	200	200	200
Min. distance leader - center cleaner	mm	500	600	750	800
Length	mm	1065	1225	1450	1600
Width	mm	1215	1300	1550	1675
Height	mm	900	900	1000	1200
Weight indication	kg	1250	1350	2000	2750

PROFESSIONALS
IN THE FIELD

PVE rotary heads are available with a unique clamping system which is very suitable for drilling soil displacement casing piles. Long pile lengths are possible by leading the steel casings through the rotary head. After reaching the final pile tip level the clamping system releases the top of the pile casing which will be ready to be filled with rebar and concrete.

For CFA piling PVE rotary heads are often combined with auger cleaners. The auger cleaners ensure a safe working area for piling workers on site. The auger cleaner also guides the auger in to the soil which contributes to the pile position accuracy.

Depending on the pile type PVE rotary heads are also available with a bayonet coupling solution for easy and fast connection to the pile casing. This solution is common for drilled soil displacement piles where the temporary drill casing is withdrawn from the soil.

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PILING & VIBRO EQUIPMENT

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